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AUTHOR Van Scoy, Irma J.
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ABSTRACT

Differences in teaching at primary and intermediate grade levels were investigated. Specific attention was given to differences in teacher behaviors, teacher communications, grouping, teacher control, and types of materials. Six primary classrooms and five intermediate classrooms were each observed for four 45-minute observation periods, yielding a total of 33 hours of data. In addition, observers, teachers, and five students from each of the same 11 classrooms responded to vignettes depicting classroom situations. Subjects' responses were coded for teacher behaviors, goals, and instructional methods. Analysis of observational data yielded significant differences in five of the nine hypotheses developed prior to the study. Compared with teachers in intermediate grades, primary teachers used significantly greater numbers of sanctions, procedural communications, and total teacher communications. Primary classrooms also used a greater proportion of small group instruction and concrete materials than did the intermediate. Analysis of subjects' responses to vignettes clarified these findings and added further detail. (Author/RH)

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THE PRIMARY DIFFERENCE: WHAT MAKES TEACHING IN THE PRIMARY GRADES UNIQUE

Dr. Irma J. Van Scoy
Department of Early and Middle Education
James Madison University
Harrisonburg, VA 22807

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Abstract

This paper reports research which investigated differences in teaching between the primary and intermediate grades. Specific hypotheses concerning differences in teacher behaviors, teacher communications, grouping, teacher control, and types of materials were developed based on child development theories and previous research. Six primary classrooms (grades one and two) and five intermediate classrooms (grades four and five) were each observed for four 45 minute observation periods yielding a total of 33 hours of data. In addition, observers, teachers, and five students from each of the same 11 classrooms responded to vignettes depicting classroom situations. Subjects' reponses were coded for teacher behaviors, goals, and instructional methods. Analysis of observational data yielded significant differences in five of the nine ways hypothesized. In comparison with teachers in intermediate grades, primary teachers used significantly greater numbers of sanctions, procedural communications, and total teacher communications. Primary classrooms also used a greater proportion of small group instruction and concrete materials than intermediate classrooms. Analysis of subjects' responses to vignettes clarified these findings and added further detail.

Introduction

The purpose of this research was to examine the similarities and differences between teaching in the primary grades (kindergarten through third) and the intermediate grades (fourth through sixth). The suggestion that there are significant differences in teaching between these levels is based on theories of child development, such as those of Piaget (1972) and Havighurst (1972). According to such theories, children of primary grade age (approximately five through eight) are different from children of intermediate grade age (approximately nine through eleven) in such areas as cognitive stages, degrees of personal independence, social relationships (including socialization to school), perceptual abilities, and physical abilities. It was hypothesized that if teaching matches the developmental levels of the students, then teaching in the primary grades may be quite different from teaching in the intermediate grades.

Hypotheses concerning differences in teaching betweeen the primary and intermediate grades were developed concerning variations between the primary and intermediate grades in amount and types of teacher communications, grouping strategies, proportion of independent work, and types of materials.

Method

Sample

The sample for the study consisted of 11 elementary classrooms--three each of grades 1, 2, and 5, and two of grade 4. These classrooms comprised all of the classrooms at those levels within the same elementary school in a small city school district in western New York State. Students came from predominately white, lower and middle income families.

All of the teachers voluntarily agreed to participate in the study. Their teaching experience ranged from 9 to 31 years, and the majority of

each teacher's classroom experience was at the level that he or she was currently teaching.

Procedures and Analysis

Two methods of data collection were used. The first was classroom observation and the second was response to vignettes by teachers, students, and observers.

Each classroom was observed for four 45 minute observation periods within one week. The observations in each classroom took place on four separate days and occurred at a different time on each of those days. These observations yielded a total of 33 hours of data. Figure 1 presents the observation instrument used. This instrument combines a system in which teacher communications (including types of sanctions, and academic and procedural communications) were categorized every 15 seconds and a system in which classroom variables (including grouping, materials, and control) were recorded once every five minutes.

Two doctoral students in education collected the data. Each observer collected data at least twice in each classroom. A reliability of 86.4% was established prior to the data collection. Reliability was calculated for 9 of the 44 observation periods of the study and the overall percent of exact agreement was 84.1%. The observational data were analyzed using *t*-tests and Mann-Whitney tests.

Observers, teachers, and five students from each classroom responded to three vignettes depicting situations involving classroom instruction and behavioral problems. Teachers and students were asked questions concerning the vignettes in live, tape-recorded interviews which lasted from 15 to 45 minutes. Observers were given the vignettes and the questions to respond to in writing.

Classroom_____ Grade level____ Observer_____ Observation #____ Time: beg_____ end_____

A. Sanctions (code each as '+' or '-')

1. Search
2. Inter-personal
3. Attainment
4. Following rules/directions
5. General

B. Handling Information

1. Asks child to hypothesize, observe, speculate
2. Lecture question
3. Statements, Conclusions
4. Relates information to child perspective

C. Procedural Communications

1. Relates to child perspective
2. Other

D. Maintainance Communications

Grouping	Teacher-directed	Independent
1. Individual		
2. Small group		
3. Large group		
4. Whole class		

Materials		
	Teacher	Student
Written:		
blackboard		
overhead		
other display		
books		
ditto		
other		
Concrete:		
manipulatives		
games		
equipment		
other		

*E--code each communication as 'e'--explanatory or '/' non-explantory

Figure 1. Classroom observation form.

Two of the vignettes dealt with behavioral problems and were designed and revised during research done by Brophy and Rohrkemper (1981). One of these vignettes described an active child knocking over another child's art project and the other vignette described a child who was daydreaming during a teacher-directed lesson. The third vignette stated that the "class is working on the topic of nutrition" and asked subjects to describe how the teacher would present a lesson on this topic. Follow-up questions were designed to elicit information in such areas as space arrangement, materials, directions, objectives, and teacher consideration of pupil characteristics.

Responses to the vignettes were coded by the author. Vignettes 1 and 2 were coded using a modified version of a system used by Rohrkemper (1982, 1984) and vignette 3 was coded using categories derived from the responses of the subjects.

Results

Five of the nine hypotheses were supported by significant differences in the observational data. Table 1 presents the results for the four hypotheses that focused on frequencies of teacher communications. As shown in the Table, primary classrooms were found to have significantly more total teacher communications ($p < .01$), teacher use of sanctions ($p < .10$), and teacher use of procedural communications ($p < .05$) than intermediate teachers. Results for the hypotheses focusing on proportions of teacher communications and classroom activities are presented in Table 2. Primary classrooms were found to use significantly more individual and small group instruction ($p < .01$) and concrete materials ($p < .05$) than intermediate classrooms. No other significant differences were found.

Table 1

Means (M), Standard Deviations (SD), and Probability Data from t-tests of Primary and Intermediate Teachers' Frequencies of Communications

	Frequency use of category				
	Primary teachers		Intermediate teachers		
Type of communication	M	SD	M	SD	t
Total communications	986.5	151.9	733.6	96.4	2.91***
Sanctions	309.7	72.7	238.8	51.6	1.65*
Procedural communications	299.2	62.3	219.2	51.5	2.07**
Child-centered communications	97.1	55.1	81.6	43.8	0.23

*$p < .10$, one-tailed. **$p < .05$, one-tailed.

***$p < .01$, one-tailed.

Table 2

Mean Proportion Use of Categories in Primary and Intermediate Classrooms

Activity/ Communication	Mean Proportion Use of Category		
	Primary	Intermediate	p
Individual/small group instruction	.30	.16	.01
Teacher-directed work	.63	.74	ns
Use of concrete materials	.25	.10	.05
Explanatory communications	.05	.06	ns
Communications handling information	.68	.75	ns

Analysis of subjects' responses to the vignettes added descriptive data that clarified the findings of the observational data. Table 3 displays the number of primary and intermediate teachers who gave the most frequently occurring responses at least once to vignettes 1 and 2. Primary teachers' reports of teacher behavior differed from reports by intermediate teachers in that their most frequent responses included changing the classroom environment, requesting an apology or restitution, and explaining why behavior was inappropriate. Intermediate teachers rarely suggested these strategies.

The observational data were supported by all three groups of subjects in response to the vignettes for the hypothesis that primary classrooms would have a greater emphasis on procedural communications than intermediate classrooms. Predictions by teachers, children, and observers more frequently focused on children's behavior in primary classrooms than in intermediate classrooms. Thus, the observational and vignette data combined to describe life in primary classrooms as highly focused on helping students to learn appropriate school behaviors.

The vignette data added further dimensions to the observational data concerning some of the hypotheses. For example, the observational data included recordings on types of materials but not the related area of classroom arrangements. Differences between primary and intermediate classrooms use of space arrangement were indicated by the vignette data with many more primary teachers and students describing the use of floor, tables, or rearranged desks when describing their lessons.

However, observational and vignette data were not always consistent. For example, although teachers spoke of a number of concerns about children's developmental levels, abilities, and past experiences in response

Table 3

Number of Primary and Intermediate Teachers Giving Selected Responses at Least Once in Vignettes 1 & 2

	Teachers	
Response	Primary n = 6	Intermediate n = 5
Teacher behavior		
ask for student input	4	5
modify teacher behavior	5	4
request restitution/apology	5	1
change environment	4	1
explain rule	4	1
give direction	3	0
isolate	0	3
help "victim"	1	2
Teacher goal		
improve behavior	3	2
keep things calm	1	3
Teacher view of student		
underlying causes	5	5
problem/bad	4	0

to the vignettes, the classroom observations found a very small number of behaviors that were classified as child-centered. Students and observers also failed to predict that teachers would cite underlying causes of students' behavior or modify their teaching behaviors to accomodate students' needs even though teachers frequently gave these responses. These findings suggest that teachers might want to modify their communications so their intentions are clearer to students.

In another discrepancy, although observational data indicated very few explanatory communications at either the primary or intermediate level, four of the six primary teachers predicted they would use explanations in response to inappropriate student behaviors. An important question is why teachers espousals did not seem to match their behaviors. Further research might clarify whether this inconsistency is a result of a weakness in the observation instrument used in this study or an accurate portrayal of a discrepancy between teacher behaviors and reports.

The research questions investigated in this study have many practical applications. School administrators might take differences between the primary and intermediate grades into account when scheduling classes, planning class sizes, determining the duties of aides, selecting curriculum materials, hiring and reassigning teachers, providing workshops and other support for teachers, and so on. Teacher educators could incorporate the knowledge of primary and intermediate differences into teacher education programs. For example, they might want to evaluate whether or not developmental considerations and teaching techniques appropriate to various grade levels are given equal attention in the training of elementary teachers. Another possible application of results clarifying differences between the elementary grades is determination of certification levels, such

as whether or not to have separate certification requirements for grades kindergarten through 3 versus grades 4 through 6.

By including two methods of data collection and input from three different sources, this study recognized the complexity of the teaching-learning process and attempted to provide as much information as possible in consideration of the hypotheses being investigated. Although analyzing such data is a complex task, the end result is not only that questions are answered more thoroughly, but that new questions are raised.

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